113607

AMENDMENT

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 -12 (Canceled)
- 13. (Previously Presented) A speech recognition method, comprising:

defining a numeric language, the numeric language including a subset of a vocabulary, the subset of the vocabulary including words that identify digits in number strings and words that enable the interpretation and understanding of number strings;

defining first acoustical models for the numeric language at a first quality level; defining second acoustical models for other words in the vocabulary at a second quality level; and

storing the first and second acoustical models in an acoustic model database that is accessible by a speech recognition processor.

- 14. (Previously Presented) The method of claim 13, wherein the numeric language includes digits, natural numbers, alphabets, re-starts, and city/country name classes.
- 15. (Previously Presented) The method of claim 13, wherein the acoustical models are hidden Markov models.
- 16. (Previously Presented) The method of claim 13, further comprising defining a set of filler models that characterizes out-of-vocabulary features.
- 17. (Previously Presented) A speech recognition method, comprising:
 receiving a speech signal;

performing a speech recognition process on the received speech signal to produce speech recognition results, the speech recognition process being based on a set of acoustical

models that has been defined for a numeric language, wherein the numeric language includes a subset of a vocabulary, the subset of the vocabulary including words that identify digits in number strings and words that enable the interpretation and understanding of number strings; and

generating a sequence of digits using said speech recognition results, said generating being based on a set of rules.

- 18. (Previously Presented) The method of claim 17, wherein said performing is implemented by a speech recognition processor.
- 19. (Previously Presented) The method of claim 17, wherein said performing is further based on a second set of acoustical models that has been defined for other words in the vocabulary.
- 20. (Previously Presented) The method of claim 19, wherein said second set of acoustical models is defined at a quality level different than the set of acoustical models for the numeric language.
- 21. (Previously Presented) The method of claim 17, wherein the numeric language includes digits, natural numbers, alphabets, re-starts, and city/country name classes.
- 22. (Previously Presented) The method of claim 17, wherein the acoustical models are hidden Markov models.
- 23. (Currently Amended) The method of claim 17, wherein said generating is implemented by a numeric recognition understanding processor.
- 24. (Previously Presented) The method of claim 17, wherein the set of rules includes one of a naturals rule and alphabets rule.

- 25. (Previously Presented) The method of claim 17, wherein the set of rules includes a restarts rule.
- 26. (Previously Presented) The method of claim 17, wherein the set of rules includes a city/country rule.
- 27. (Previously Presented) The method of claim 17, wherein the set of rules_includes a numeric phrases rule that realigns digits.
- 28. (Previously Presented) A system, comprising:

numeric language; and

a speech recognition processor that receives unconstrained input speech and outputs a string of words, the speech recognition processor being based on a numeric language that represents a subset of a vocabulary, the subset including a set of words identified as being relevant for interpreting and understanding number strings; and

a numeric understanding processor containing classes of rules for converting the string of words into a sequence of digits.

- 29. (Previously Presented) The system of claim 28, further comprising: an acoustic model database utilized by the speech recognition processor.
- 30. (Previously Presented) The system of claim 29, wherein the acoustic model comprises: a first set of hidden Markov models that characterize acoustic features of words in the

a second set of hidden Markov models that characterize acoustic features of words in the remainder of the vocabulary.

- 31. (Previously Presented) The system of claim 30, further comprising: a set of filler models that characterizes out-of-vocabulary features.
- 32. (Previously Presented) The system of claim 28, further comprising:

an utterance verification processor that identifies out-of-vocabulary utterances and utterances that are poorly recognized.

- 33. (Previously Presented) The system of claim 28, further comprising:
 - a validation database that stores a set of valid numbers; and
- a string validation processor that outputs validity information based on a comparison of a sequence of digits output by the numeric understanding processor with valid numbers in the validation database.
- 34. (Previously Presented) The system of claim 33, further comprising:a dialogue manager processor that initiates an action based on the validity information.
- 35. (Previously Presented) The system of claim 28, further comprising:
 a language model database that stores data describing the structure and sequence of words
 and phrases.
- 36. (Previously Presented) The system of claim 28, wherein said numeric language includes digits, natural numbers, alphabets, re-starts, and city/country name phrase classes.